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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.6.03.04i [Index Number 609]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.6.03.04i [Index Number 609]. This ITAAC confirms that the Class 1E DC and Uninterruptible Power Supply System (IDS) supplies an operating voltage at the terminals of the specified Class 1E motor operated valves that is greater than or equal to the minimum design voltage. The closure process for this ITAAC is based on the guidance described in Nuclear Energy Institute (NEI) 08-01, "Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52," which was endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,

Kelli Roberts for JMC

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Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.6.03.04i [Index Number 609]

JMC/TJC/sfr

cc: Regional Administrator, Region II
Director, Office of Nuclear Reactor Regulation (NRR)
Director, Vogtle Project Office NRR
Senior Resident Inspector – Vogtle 3 & 4

Southern Nuclear Operating Company
ND-23-0447
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.6.03.04i [Index Number 609]

ITAAC Statement

Design Commitment

4.i) The IDS supplies an operating voltage at the terminals of the Class 1E motor operated valves identified in subsections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.2, 2.3.6, and 2.7.1 that is greater than or equal to the minimum design voltage.

Inspections/Tests/Analyses

Testing will be performed by measuring the voltage during motor starting at both the IDS battery and motor-operated valve motor terminals while each motor-operated valve is stroked. Analyses will be performed to verify that the voltage at the motor-operated valve motor terminals is greater than or equal to the minimum design voltage of each motor-operated valve with an IDS battery terminal voltage of 210 Vdc.

Acceptance Criteria

A report exists and concludes that IDS can provide a voltage greater than or equal to each valve's minimum design voltage to the motor terminals of each motor-operated valve when power is supplied under design conditions from IDS batteries with battery terminal voltage at 210 Vdc while each motor-operated valve is stroked.

ITAAC Determination Basis

Testing was performed by measuring the voltage during motor starting at both the Class 1E DC and Uninterruptible Power Supply system (IDS) battery and motor-operated valve (MOV) motor terminals while each MOV is stroked. Analyses were performed to verify that the voltage at the MOV motor terminals is greater than or equal to the minimum design voltage of each MOV with an IDS battery terminal voltage of 210 volts direct current (Vdc).

Analyses were performed in accordance with SV4-IDS-E0C-004 (Reference 1) to determine the voltage drop on each power circuit at a battery voltage of 210 Vdc and the resulting voltage at the MOV terminals during normal operating conditions, and accident conditions. Reference 1 is the basis of analyses performed in accordance with SV4-IDS-E0C-018 (Reference 2). The analyses determined the expected voltage at the MOV terminals and defined the method for the determination of the minimum acceptance voltage for each MOV during preoperational testing.

Each MOV identified in Combined License (COL) Appendix C, Subsections 2.1.2, 2.2.1,2.2.2, 2.2.3, 2.2.4, 2.3.2, 2.3.6, and 2.7.1 (Attachment A) was stroked individually as documented in SV4-IDS-E0R-007 (Reference 3). The voltage at the battery terminals and at the MOV terminals was recorded during MOV operation using installed maintenance and test equipment. The recorded voltage at the MOV terminals was analyzed in accordance with the method described in Reference 2, to compare proportional values when the tested battery voltage is higher or lower than the nominal voltage assumed in the analysis of Reference 2, to determine the minimum acceptance voltage for each MOV. A resulting proportional voltage that is greater than or equal to the minimum design voltage of each MOV confirms the tested voltage is bounded by the analysis in Reference 2.

The analyses and preoperational test results (References 1 through 3) confirmed that IDS can provide a voltage greater than or equal to each MOV's minimum design voltage to the terminals of each MOV, as specified in Reference 2, when power is supplied under design conditions from IDS batteries with battery terminal voltage at 210 Vdc while each MOV is stroked.

References 1 through 3 are available for NRC inspection as part of Unit 4 ITAAC Completion Package (Reference 4).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This review found there were no relevant findings associated with this ITAAC. The review is documented in the ITAAC 2.6.03.04i Completion Package (Reference 4) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.6.03.04i was performed for VEGP Unit 4 and the prescribed acceptance criteria was met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. SV4-IDS-E0C-004, Rev 6, "IDS Power Cable Sizing and Voltage Drop Analysis"
2. SV4-IDS-E0C-018, Rev 1, "MOV Acceptance Voltage During Safety Related DC MOV Field Testing"
3. SV4-IDS-E0R-007, Rev. 0, “Vogtle Unit 4 IDS System ITAAC 2.6.03.04i MOV Voltage Test Analyses Report”
4. 2.6.03.04i-U4-CP-Rev0, ITAAC Completion Package

Attachment A

Table 2.1.2-1*	
Equipment Name*	**Tag No.***
First-stage ADS Motor-operated Valve (MOV)	RCS-PL-V001A
First-stage ADS MOV	RCS-PL-V001B
Second-stage ADS MOV	RCS-PL-V002A
Second-stage ADS MOV	RCS-PL-V002B
Third-stage ADS MOV	RCS-PL-V003A
Third-stage ADS MOV	RCS-PL-V003B
First-stage ADS Isolation MOV	RCS-PL-V011A
First-stage ADS Isolation MOV	RCS-PL-V011B
Second-stage ADS Isolation MOV	RCS-PL-V012A
Second-stage ADS Isolation MOV	RCS-PL-V012B
Third-stage ADS Isolation MOV	RCS-PL-V013A
Third-stage ADS Isolation MOV	RCS-PL-V013B
Fourth-stage ADS MOV	RCS-PL-V014A
Fourth-stage ADS MOV	RCS-PL-V014B
Fourth-stage ADS MOV	RCS-PL-V014C
Fourth-stage ADS MOV	RCS-PL-V014D

Table 2.2.1-1*	
Equipment Name*	**Tag No.***
Component Cooling Water System (CCS) Containment Isolation Motor-operated Valve (MOV) – Inlet Line Outside Reactor Containment (ORC)	CCS-PL-V200
CCS Containment Isolation MOV – Outlet Line IRC	CCS-PL-V207
CCS Containment Isolation MOV – Outlet Line ORC	CCS-PL-V208
SFS Discharge Line Containment Isolation MOV – ORC	SFS-PL-V038
SFS Suction Line Containment Isolation MOV – IRC	SFS-PL-V034
SFS Suction Line Containment Isolation MOV – ORC	SFS-PL-V035
Vacuum Relief Containment Isolation A MOV – ORC	VFS-PL-V800A
Vacuum Relief Containment Isolation B MOV – ORC	VFS-PL-V800B

Table 2.2.2-1*	
Component Name*	**Tag No.***
PCCWST Isolation Valve MOV	PCS-PL-V001C
PCCWST Isolation Block MOV	PCS-PL-V002A
PCCWST Isolation Block MOV	PCS-PL-V002B
PCCWST Isolation Block MOV	PCS-PL-V002C

* Excerpts from COL Tables 2.1.2-1, 2.2.1-1, and 2.2.2-1.

Attachment A (Cont.)

Table 2.2.3-1*	
Equipment Name*	**Tag No.***
CMT A Inlet Isolation Motor-operated Valve	PXS-PL-V002A
CMT B Inlet Isolation Motor-operated Valve	PXS-PL-V002B
PRHR HX Inlet Isolation Motor-operated Valve	PXS-PL-V101
Containment Recirculation A Isolation Motor-operated Valve	PXS-PL-V117A
Containment Recirculation B Isolation Motor-operated Valve	PXS-PL-V117B

Table 2.2.4-1*	
Equipment Name*	**Tag No.***
Power-operated Relief Valve Block Motor-operated Valve Steam Generator 01	SGS-PL-V027A
Power-operated Relief Valve Block Motor-operated Valve Steam Generator 02	SGS-PL-V027B
Startup Feedwater Isolation Motor-operated Valve	SGS-PL-V067A
Startup Feedwater Isolation Motor-operated Valve	SGS-PL-V067B

Table 2.3.2-1*	
Equipment Name*	**Tag No.***
RCS Purification Motor-operated Isolation Valve	CVS-PL-V001
RCS Purification Motor-operated Isolation Valve	CVS-PL-V002
RCS Purification Motor-operated Isolation Valve	CVS-PL-V003
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V090
CVS Makeup Line Containment Isolation Motor-operated Valve	CVS-PL-V091

Table 2.3.6-1*	
Equipment Name*	**Tag No.***
RCS Inner Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V001A
RCS Inner Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V001B
RCS Outer Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V002A
RCS Outer Hot Leg Suction Motor-operated Isolation Valve	RNS-PL-V002B
RNS Discharge Motor-operated Containment Isolation Valve	RNS-PL-V011
RNS Suction Header Motor-operated Containment Isolation Valve	RNS-PL-V022
RNS Suction from IRWST Motor-operated Isolation Valve	RNS-PL-V023

* Excerpts from COL Tables 2.2.3-1, 2.2.4-1, 2.3.2-1, and 2.3.6-1.

Attachment A (Cont.)

Table 2.7.1-1*	
Equipment Name*	**Tag No.***
MCR Supply Air Isolation Valve	VBS-PL-V186
MCR Supply Air Isolation Valve	VBS-PL-V187
MCR Return Air Isolation Valve	VBS-PL-V188
MCR Return Air Isolation Valve	VBS-PL-V189
MCR Exhaust Air Isolation Valve	VBS-PL-V190
MCR Exhaust Air Isolation Valve	VBS-PL-V191
MCR SDS (Vent) Isolation Valve	SDS-PL-V001
MCR SDS (Vent) Isolation Valve	SDS-PL-V002

* Excerpt from COL Table 2.7.1-1.